

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

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| Applicant's or agent's file reference 04R00769WO00 | FOR FURTHER ACTION | See item 4 below |
| International application No. PCT/JP2004/012994 | International filing date (<i>day/month/year</i>) 07 September 2004 (07.09.2004) | Priority date (<i>day/month/year</i>) 09 September 2003 (09.09.2003) |
| International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237 | | |
| Applicant SHARP KABUSHIKI KAISHA | | |

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|-------------------------------------|--|---|-----------|---------------------|--------------------------|------------|----------|--------------------------|-------------|--|-------------------------------------|------------|----------------------------|-------------------------------------|-----------|---|--------------------------|------------|-------------------------|--------------------------|-------------|--|-------------------------------------|--------------|---|
| 1. | This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i> .1(a). | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. | This REPORT consists of a total of 7 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead. | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. | <p>This report contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 40%;">Box No. I</td> <td style="width: 50%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> | <input checked="" type="checkbox"/> | Box No. I | Basis of the report | <input type="checkbox"/> | Box No. II | Priority | <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | <input checked="" type="checkbox"/> | Box No. IV | Lack of unity of invention | <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | <input type="checkbox"/> | Box No. VI | Certain documents cited | <input type="checkbox"/> | Box No. VII | Certain defects in the international application | <input checked="" type="checkbox"/> | Box No. VIII | Certain observations on the international application |
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. II | Priority | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Box No. IV | Lack of unity of invention | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VI | Certain documents cited | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | Box No. VIII | Certain observations on the international application | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2). | | | | | | | | | | | | | | | | | | | | | | | | |

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| <p style="text-align: center;">The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. +41 22 338 82 70</p> | <p>Date of issuance of this report 26 June 2006 (26.06.2006)</p> <p>Authorized officer Masashi Honda</p> <p>e-mail: pt08@wipo.int</p> |
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PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference

04R00769WO00

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2004/012994

International filing date (day/month/year)

07.09.2004

Priority date (day/month/year)

09.09.2003

International Patent Classification (IPC) or both national classification and IPC

Applicant

SHARP KABUSHIKI KAISHA

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/012994

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in the international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/012994

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:
- ☐ paid additional fees
 - ☐ paid additional fees under protest
 - ☐ not paid additional fees
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☒ not complied with for the following reasons:

The common subject matter of claims 1-8 is "a developing device comprising a stirring roller having stirring blades for stirring a developer, a developing roller for transferring the developer to an electrostatic latent image, a control member for controlling the amount of developer transferred from the developing roller to the electrostatic latent image, and a reflux plate by which the excess developer resulting from control by the controlling member is refluxed to the stirring roller, one end of which is disposed in the vicinity of the outer periphery of the stirring roller."

However, the result of the search revealed that the above constitution is disclosed in document JP 10-198172 A (Fuji Xerox Co., Ltd.), 31 July 1998, and therefore does not possess novelty.

As a result, the above constitution does not go beyond the prior art, and this common subject matter is not a special technical feature in the meaning of the second sentence of PCT Rule 13.2.

Therefore, none of the inventions of claims 1-18 constitute subject matter which is common technical features.

As no other common subject matter exists which could be deemed special technical features in the meaning of the second sentence of PCT Rule 13.2, it is impossible to find a technical relation within the meaning of PCT Rule 13 among these differing inventions.

Therefore, the inventions of claims 1-8 clearly do not comply with the requirement for unity of invention.

4. Consequently, this opinion has been established in respect of the following parts of the international application:
- ☒ all parts
 - ☐ the parts relating to claims Nos. _____

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2004/012994

| Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | |
|---|--|------------|-----|
| 1. Statement | | | |
| Novelty (N) | Claims | 1, 2, 5, 7 | YES |
| | Claims | 3, 4, 6, 8 | NO |
| Inventive step (IS) | Claims | | YES |
| | Claims | 1-8 | NO |
| Industrial applicability (IA) | Claims | 1-8 | YES |
| | Claims | | NO |
| 2. Citations and explanations: | | | |
| <p>Document 1: JP 63-271487 A (Mita Industrial Co., Ltd.), 09 September 1998, full text, all drawings (Family: none)</p> <p>Document 2: JP 2002-31941 A (Canon Inc.), 31 January 2002, fully text, all drawings, (Family: none)</p> <p>Document 3: JP 10-198172 A (Fuji Xerox Co., Ltd.), 31 July 1998, fully text, all drawings, (Family: none)</p> <p>The inventions of claims 1 and 2 do not appear to involve an inventive step over document 1 cited in the ISR. Fig. 1 in document 1 describes a lower end of a partition plate is disposed a predetermined distance separated from the stirring roller, and disposing it separated by a predetermined distance is design matter to be appropriately achieved by a person skilled in the art. See the opinion in Box VIII regarding the predetermined distance being the maximum flight distance of the developer.</p> <p>The inventions of claims 3 and 4 do not appear to possess novelty or involve an inventive step, as they are described in Fig. 1 of document 1.</p> <p>The invention of claim 5 does not appear to involve an inventive step over document 1, and document 2 cited in the ISR. It would be easy for a person skilled in the art to apply the angle of repose described in document 2 to the partition plate of the device of document 1.</p> <p>The invention of claim 6 does not appear to possess novelty or involve an inventive step, as it is described in document 1 cited in the ISR.</p> | | | |

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/012994

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 1 describes a "maximum flight distance of developer due to rotation of the stirring roller," but the specification contains no description of what to consider the range of this distance, and is therefore not sufficiently backed up by the specification. (The maximum flight distance of developer due to rotation of the stirring roller is influenced in various ways by the type of developer, the constitution of the stirring roller, the rotation speed of the stirring roller, and so on.)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/012994

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

The invention of claim 7 does not appear to involve an inventive step over document 1, and document 3 cited in the ISR. It would be easy for a person skilled in the art to apply the developer of a size described in document 3 to the developing device described in document 1.

The invention of claim 8 does not appear to possess novelty or involve an inventive step, because it is described in document 1.